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RAILWAY RATE THEORIES OF THE INTERSTATE COMMERCE COMMISSION. I.

SUMMARY

An inductive study of rate theories, 1. — Decisions of the Interstate Commerce Commission as material for such a study, 4. — I. Commission's preliminary statement of the fundamental principle of rate making, 7. — The determining factors in the Commission's decisions, 10. — II. Value of commodity as a rate basis, 11. — 1. Competitive commodities, 12. (a) in different stages of manufacture, 13. — (b) as possible substitutes for each other, 25. — 2. Non-competitive commodities, 28. — 3. Market value the criterion, 33. — 4. Social considerations, 35. — III. Cost of service as a rate basis, 40. — 1. Some special service rendered, 42. — 2. Comparison with other commodities, 50. — 3. Comparison with rates elsewhere, 58. — 4. Car load and less than car load shipments, 60. — Conclusion with reference to cost of service, 65.

THE theory of railway rates does not seem to have secured from American economists within recent years that degree of interest which a couple of decades ago was accorded to the subject. This lack of theoretical discussion is the more surprising when one considers that there has been no lack of public interest in railway matters, as is illustrated by the discussions which have taken place both within and without legislative halls. A great mass of literature, scientific

as well as popular, dealing with various phases of the transportation problem has been called forth by this public interest in railways, and yet in all this literature one finds little trace of a serious effort once more to examine and define the principles on which the prices of railway transportation are based.

The probable explanation for this neglect of the theoretical aspects of the transportation problem is to be found in the shifting of interest which has taken place from problems arising out of railway competition to those due to threatened monopoly. A couple of decades ago the fear of railway monopolies was not seriously felt, or at best was only forcasted, not considered as a thing of immediate practical importance. All dangers from that source, it was believed, were effectually forestalled by the legislative prohibition of pooling. Having disposed of the subject in this summary fashion the public turned its attention to that which was felt to be the more urgent problem, — how to prevent discriminations between competing shippers.

Railway managers, finding their efforts to maintain high rates at non-competitive points hampered, if not blocked, and compelled at the same time to continue their struggles with rival roads at competitive points, began to seek a relief from this situation by bringing about a consolidation of the competing roads. The public has accordingly been confronted with the danger of an actual railway monopoly. The question as to whether a given rate is equitable as compared with rates charged on other commodities or with rates charged to competing shippers has given way in large measure to the question as to whether or not an entire schedule of rates is too high. Such theoretical discussion of railway rates as we have had

within recent years has therefore centered around the question as to whether rates can be so adjusted as to yield only a fair return on the value of railway property and as to the best methods of determining that value.

Important as this problem doubtless is, no one would think for a moment that its solution would solve all the difficulties of rate making, or that it would furnish all the principles from which a satisfactory theory of railway rates could be deduced. The importance of a complete theory of railway rates, in harmony with correct economic principles, will never diminish as long as transportation costs continue to form a considerable part in the total costs of producing commodities, and as long as competing shippers and competing localities continue to produce the same commodities for sale in a common market.

The need of ascertaining the economic principles which should govern the actions of those entrusted with the power of rate making has even been emphasized by recent changes in railway laws and proposals for further legislation. A number of the American states have created railway commissions or have strengthened the powers of existing ones, and have placed in their hands the power and responsibility for fixing, in large measure at least, the actual rates for transportation. The Hepburn Act of June 29, 1906, increased the power over rates possessed by the Interstate Commerce Commission and a further increase in its powers has now been made. The fact that the final determination of rates does not rest with the Commission but is left to a special Court of Commerce is probably of little consequence in so far as the final results are concerned. Experience elsewhere shows, as in the case of the English Railway

Commission, and in the case of the courts of arbitration and minimum-wage boards of the Australasian colonies, that wherever special tribunals are created having authority to determine prices and wages, these tribunals, provided only that they are not subject to frequent changes in membership, tend to evolve from their own experiences a set of principles in harmony with existing economic relations and tendencies.

This fact suggests the possibility of evolving a theory of railway rates from a study of the decisions of such railway commissions as have already been in existence. Such a study would be inductive in its methods, in contrast to the deductive methods which have usually been followed by those who have written on this subject. Starting with some general principle of valuation, such as the marginal utility of the service to the shipper, the principle of joint cost, or the tax principle of ability to pay, — various writers have endeavored to show that this given principle was fundamental in the explanation of the theory of railway charges. Without raising here the question as to the validity of the deductive method when applied to the problem of railway rates, or without attempting to discuss any of the principles mentioned above, it may be stated without hesitation that such an inductive study as is here proposed should go far towards confirming or denying the conclusions derived by the deductive method of handling the problem.

The decisions of the Interstate Commerce Commission handed down during the years 1887 to 1906 appear to offer the best opportunity for such an inductive study applicable to American conditions. During those years the Commission was required to report not only its conclusions in each case heard by it but also " the findings of fact " upon which the

conclusions were based. Since the passage of the Hepburn Act the Commission has not been required to report "the findings of fact," except in cases where damages are awarded. Tho this is doubtless sufficient for practical purposes, the absence from the reports of the Commission's "findings of fact" makes the later decisions of less value to the student who seeks to follow the path of reasoning by which the Commissioners were led to their final decision.

In view of the circumstance that in a number of important cases the decisions of the Commission were over-ruled by the courts, when the question considered was not, "is this in accordance with social and economic considerations?" but rather, "Is the decision in accordance with the law and the Constitution?" one may be inclined to question whether, after all, the decisions of the Commission do reflect economic tendencies and principles and thus afford valuable material for a study of rate theories. It may be admitted at the outset that since the Commission was in duty bound to follow the decisions of the courts in subsequent cases of the same sort, the later cases do not afford as good an opportunity as do the earlier ones for obtaining the Commission's unprejudiced views as to the principles involved. These cases are, however, in a minority and even in these cases the Commission usually makes it clear that in reaching its conclusions it is merely following the orders of the court, and is not presenting its own views on the subject. In its reported "findings of fact," the student will usually have no difficulty in discovering the answer which the Commission would have given in the particular case, had it been free to follow its own reasoning to a logical conclusion instead of applying the precedents established by the courts.

In seeking to discover from a study of the decisions of the Interstate Commerce Commission what are the underlying principles in a complete theory of railway rates, it is not intended to imply that the Commissioners are infallible or that their conclusions always reflect sound economic doctrines. On the contrary the decisions are often open to criticism. A division of opinion within the Commission itself is not infrequent, and the strong pressure of conflicting interests occasionally leads to compromises intended to satisfy in a measure all parties concerned. Yet owing to the fact that in the course of two decades numerous cases involving the same principles have come before the Commission for adjudication, and that conclusions reached on the basis of unsound reasoning have failed to give satisfaction and have had to be corrected, it is believed that a study of the cases will throw much light on economic tendencies at work to establish the truth of fundamental principles.[1] Certainly experience is the only safe method for testing our theoretical conclusions, and Mill's dictum that "practice long precedes science" should hold true in this field of inquiry, as in other departments of human affairs.

The members of the Interstate Commerce Commission seem generally to have been appointed without much reference to political considerations and they have usually been men of such intellectual calibre

[1] "The facts presented in this long series of cases are kaleidoscopic. A single fact may appear a hundred times but it always comes again in different company. Never, perhaps, does exactly the same group of facts reappear in exactly the same combination or relationship Hence each group of facts embraced in a case and each decision based upon the same has an individuality of its own. Generally speaking, no two cases are alike in every respect, and no rule of thumb can be devised by which a decision can be rendered Yet, tho each decision has its peculiar characteristics, an analysis and comparison of many cases and decisions reveals certain common elements or underlying principles and views" — B H Meyer, Railway Legislation in the United States, p. 195

as to command the confidence of the public. While the fact that for the most part they have been lawyers has undoubtedly tended to give a legal bias to their conclusions, membership on the Commission has usually lasted long enough to give the Commissioners familiarity with the practical side of railway affairs and with the economic considerations involved. Probably most students of American railway problems would accept Professor B. H. Meyer's statement [1] that the decisions of the Interstate Commerce Commission offer to the public "the most varied, the most widely distributed, the most concrete and the best authenticated collection of facts relating to railways in the United States that is available at the present time." From the conclusions of the Commissioners who have been obliged to study this mass of facts and pass judgment on the questions at issue, it should be possible to obtain some insight into the problem of determining the general principles of rate making.[2]

I. Commission's Preliminary Discussion of Rate Theories

The original members of the Interstate Commerce Commission did not approach the work of rate adjudication without a preconceived opinion as to the principles on which railway rates should be based. In their First Annual Report, under the heading

[1] Railway Legislation in the United States, p. 196.

[2] It may not be out of place for the writer to explain the methods by which he has sought to reach the conclusions to be set forth. From a study of the abstracts of the Commission's decisions given in the annual reports he has selected those cases which seemed most likely to offer a discussion of the principles involved in rate making. 135 cases were selected and the full reports of these cases were then studied in detail and thoroly analyzed with the purpose of ascertaining what in each case was the leading principle involved. The cases were then classified according to these leading principles.

"Classification," the Commissioners discuss the theory of railway charges. *Cost of service* as a basis of rate making they reject, not alone because of the difficulties involved in determining the cost for each commodity separately, but because they believe that such a method of apportionment "would restrict within very narrow limits the commerce in articles whose bulk or weight was large as compared with their value."

Value of service, on the other hand, they accept as the true principle of rate making.

> Such method of apportionment would be best for the country because it would enlarge commerce and extend communication; it would be best for the railroads, because it would build up a large business, and it would not be unjust to property owners, who would thus be made to pay in some proportion to benefits received.[1]

Just how the value of the service is itself to be measured or even estimated the Commissioners do not undertake to say. In some of the early decisions rendered by the Commission, where the statement is repeated that value and not cost of service constitutes the true principle for determining the reasonableness of a given rate, we do find something approaching to a discussion of this subject. Thus, in one of the Standard Oil cases, we are told that "the effect of transportation upon market value is taken into account by carriers in making rates," [2] and this the Commissioners imply is the way to measure the value of the service to the owner of the property carried.

[1] First Annual Report of the Interstate Commerce Commission, pp 30–32

[2] Rice v. Louisville & Nashville R R. Co., 1 I C C. Rep. 503; 1 I C R 722 (There are two editions of the bound volumes of the Interstate Commerce Commission's decisions. One edition contains only the decisions and is always referred to as I. C. C Rep. The other edition contains Reports and Decisions and is referred to as I. C. R The set to which I have had access contains some volumes from both editions.)

Again in the case of the *Imperial Coal Co. v. the Pittsburg & L. E. R. R. Co.*[1] the Commissioners declare that "the value of the service to the shipper, in a general sense, is the ability to reach a market and to make his commodity a subject of commerce," and a little further on they say, "In a more definite and accurate sense it consists in reaching a market at a profit, being in effect what the traffic will bear to be remunerative to the producer or dealer."

These statements all seem to imply that the value of the service is measured by the difference in the market value of the commodity at the point of shipment and at the place of unloading. Both theory and experience, however, teach us that this difference is itself determined, in the long run, by the railway rate. Thus, in the report made by the Commission as a result of its investigations of *Alleged Excessive Freight Rates and Charges on Food Products*,[2] we are told: —

> The price of farm products at railway stations is usually the market price in Chicago, St. Louis, New York, or other markets to which shipments from such stations are usually made, less transportation charges and commissions.

The statement that railway rates are fixed in accordance with the value of the service is thus seen to be little more than a truism. In the oil and the coal cases just referred to, as well as elsewhere in the Commission's decisions, the value of the service is considered to have the same meaning as the railway man's expression "what the traffic will bear," and it is not difficult to see that what the traffic will bear, or what the service is worth depends upon whether one views this from the standpoint of the carrier, the shipper, the producer, or the consumer.

[1] 2 I. C. C. Rep. 618; 2 I. C. R. 436. [2] 4 I. C. C. Rep. 116; 3 I. C. R. 94.

The term "value of service" may have some importance as an expression of an ideal relationship which should exist between railway rates, but it will not, in many instances at least, serve as a definite standard by which railway rates may be measured and compared.

More assistance in the way of solving our problem will be gained by an analysis of the Commission's decisions. In this way we shall be able to discover what concrete standards the Commissioners have themselves set up for measuring the reasonableness of a given rate when they have been brought face to face with the problems of rate making. For it may be stated at the outset that no single principle has been used by the Commission for solving all the problems of rate making; or, at any rate, if the Commissioners insist on their statement that value of service is the underlying principle in all cases, this expression is used in such a broad sense that it is made to include a variety of considerations any one of which may at times be made the leading factor in the Commission's decisions. Opinions may differ somewhat as to the best way of stating the factors involved. By the present writer they have been classified as follows: (1) the relative values of the commodities transported; (2) the relative costs of transporting the commodities; (3) the relative distances the articles are carried; (4) the relative natural advantages of location possessed by various places; (5) the special and peculiar interests of a given section or of a given class of producers; (6) the importance of maintaining competition: (7) the extent to which a given rate tends to yield a fair return on the actual capital investment.

By one or another of these standards it is believed that in all the cases coming before the Commission its members have (often times unconsciously) sought to

measure the reasonableness of a given rate. It is true that in many cases several of these standards are employed, but a careful study of the case will usually show that some one of the above considerations has been made especially prominent in reaching a conclusion; or, if the case is a very complicated one, that one standard has been applied for testing the reasonableness of the rates in one part of the case and another standard has been used elsewhere. This is practically equivalent to treating the matter as two or more cases, and it will be so treated in the following pages. In those instances where one standard of comparison has been made the primary test of the equitableness of a given rate but there are other considerations of secondary importance, the case has, of course, been treated under the primary heading.

In the following pages we shall consider separately each of the above-mentioned standards of comparison and shall endeavor to show the extent to which the Interstate Commerce Commission has made use of it as a basis for determining the reasonableness of rates. After this review it will be our task to endeavor to harmonize these diverse and sometimes apparently conflicting principles, and to see if their relations to each other cannot be so adjusted as to make it possible to evolve a complete theory of rate making.

II. Value of Commodity

In the discussion of rate theories which is found in the First Annual Report [1] and to which reference has already been made, the Commissioners declare that "the value of the article carried [is] the most important element in determining what shall be paid upon

[1] Pp. 30–32.

it." Practically the same position is taken in the Second Annual Report,[1] where it is said that the apportionment of rates according to the value of the service "would seldom be burdensome to articles of high value, but it would relieve cheaper articles from burdens which, if apportioned strictly to the cost to the carriers of their transportation would render carriage for considerable distances out of the question."

The Commissioners are careful to state that the value of the commodity is not the only consideration which enters into value of service. The emphasis which they place upon it, however, as being "the most important element" in determining the value of the service makes it desirable that we should first take up for consideration those cases in which value of commodity is made the standard for measuring the equity of a given rate.

1. *Competitive Commodities*

The first group of cases of this sort consists of those in which the Commission has had to deal with the rates on commodities closely related in character and frequently competitive with each other in the open market. This group may further be divided into two sub-groups. The first sub-group includes articles offered for transportation in different stages of manufacture. In such cases the relative rates charged will often determine the place where the later stages of manufacture shall be carried on. In the second sub-group, the articles do not represent the same commodity but are nevertheless substitutes for each other and the transportation rates might easily determine which commodity should be used.

[1] P 35.

(*a*) In the first sub-group the case [1] which first demands consideration has to do with the rates to be charged on "hub-blocks" for use in the manufacture of wheeled vehicles "but upon which only so much labor has been expended as is needful to put them into condition for seasoning." The carrier, made defendant in this proceeding, had been classifying these blocks in the fifth class with unfinished wagon materials. The Commissioners ordered a reduction to sixth class and required that the same rates be applied as were given to lumber. A difference in the values of the commodities is given as a reason for their decision. A car load of hub-blocks was worth only $280, while a car load of the hubs, turned but not yet mortised, would be worth about $5000. A case [2] of the same general character was that which had to do with the relative rates on partially manufactured furniture and on the finished commodities. Complaint was made that the carriers were charging the same rate (30 cents per 100 pounds) on chair materials shipped from Detroit to Omaha as they were charging for the finished chairs. In the case of the materials, the value at Detroit was only $7 per dozen chairs, while the value of the finished chairs was $28 per dozen at Detroit, and $30 at Omaha.

The counsel for the roads raised two points of interest in connection with the claim of the defendant that owing to the lower value of the chair materials lower rates should be given than on the finished chairs. (1) Owing to the fact that a car load of chair materials weighed from 25,000 to 30,000 pounds while a car load of finished chairs weighed only 7,000 pounds, it

[1] F. L. Hurlburt v. L. S. & M. S. R'y Co.; 2 I. C. C. Rep. 122; 2 I. C. R. 81.

[2] Murphy, Wasey & Co. v. Wabash R. R. Co. et al., 5 I. C. C. Rep. 122; 3 I. C. R. 725.

was said that the value of a car load of materials was about the same as that of a car load of the finished articles, and this he argued warranted charging the same rate *per 100 pounds* on the two shipments. (2) It was said that the proper basis for making rates was the "increased value of such car loads after their arrival at Omaha." [1]

The Commission held: (1) [2] "that the proper basis would seem to be their value at Detroit when shipped"; (2) that while the carriers were justified in making such charges as would yield "a greater compensation in the aggregate for hauling a large than a small car load, as a general rule the rate per 100 pounds should be less in the former than in the latter case." The Commission, therefore, left the rates on the finished commodities at 30 cents per 100 pounds and fixed the rate on wooden materials at not more than 20 cents per 100 pounds.

Precisely the same situation was revealed in another case [3] in which the Commission expressed the opinion that unfinished bed-room sets should be given a rate of 85 per cent of that granted to the finished articles, because of "the difference in value of the unfinished and finished furniture . . . and the greater tonnage per car load which can be hauled of the former." In both of these cases it will be noted that cost of service as well as value of commodity is cited as a reason for the difference in the rates.

The same principles applied in the above cases also find expression in several other cases where the ques-

[1] This seems to be a logical application of the Commission's theory that value of service is measured by the "effect of transportation on market value."

[2] For the purpose of clearly distinguishing the various points in the Commissioners' arguments I have numbered them in this case as in many succeeding cases.

[3] Potter Mfg. Co. v. Chi. & Grand Trunk R'y Co. et al, 5 I. C. C. Rep. 514; 4 I. C. R. 223.

tion is raised as to what shall be the relation of rates on raw or semi-finished materials as compared to those on the finished commodities. Thus the Commission refused [1] to give its approval to the practice of certain carriers in classifying hatters' furs and fur scraps and cuttings as double first-class with correspondingly high rates, while at the same time hats, the finished product, were placed in the first class of the Official classification. Here again other considerations, such as competition and cost of service, enter into the decision; but value of commodity is apparently the consideration chiefly held in mind. The Commissioners say: —

> We should be inclined to say that fur scrap and cuttings must be rated higher than second class were it not for the claim of the defendants that this would lead to fraud in the billing of fur and fur scraps. . . . Hatters' fur, the raw material, does compete in a way with hats, the finished product, and we do not think that, under the circumstances of this case, the rate upon the raw material ought to be greater than upon the finished product.

On the same grounds the Commission refused [2] to allow leather scraps to be classed with sole leather and to be given the same rates, when the complainant in the case had proved that the value of the leather scraps was only from 2 to 5 cents per pound while sole leather was valued at from 25 to 45 cents per pound. Even in this case the Commission adds a cost of service argument to its decision in stating that "liability to damage in case of scrap is practically nothing."

The Commission also decided [3] that, altho carriers were not obliged to adopt such a classification as

[1] Myer v. C. C. C. & St. L. R'y Co. et al., 9 I. C. C. Rep. 78.

[2] Newman v. N. Y. C. & H. R. Co. et al., 11 I. C. C. Rep. 517.

[3] National Machinery & Wrecking Company v. P. C. & St. L. R'y Co. et al., 11 I. C. C. Rep. 581.

would provide one rate on new dynamos and another on second-hand ones, in case the second-hand dynamo was bought for the purpose of being converted into junk and had actually no other value, carriers were bound to apply rates offered on scrap iron. "Its value is no greater than the selling price by the pound of the metal which it contains, not indeed as great since a certain amount of labor must be expended before even that price can be obtained." Here again the logic of the value of commodity argument is somewhat disturbed by the statement that a dynamo, as such, can properly be charged a high rate because it requires great care in handling.

What appears at first as a perversion of the underlying principle of the above cases, viz. that raw materials should take a lower rate than the commodities made therefrom, is illustrated in a decision [1] of the Commission that window shades could not lawfully be charged a higher rate than the material from which they were made. The decision was, however, true to the value of commodity principle, for the evidence clearly showed that the material (window hollands) was pound for pound more valuable than the finished commodity. "The items of similar bulk and weight, less value and risk of carriage, and important volume of traffic, are all in the direction of giving window shades a classification as low as that which is provided for window hollands." The carriers had been classifying manufactured window shades in class one and window hollands in class three of the Official Classification. The Commission ordered them both into class three. The U. S. Circuit Court refused to enforce this order of the Commission on the ground that it "applied to shades having very high value as

[1] Page et al. v. D. L & W. R. R., 6 I C. C. Rep. 148; 49 I. C R. 525

well as to the cheaper varieties." Accordingly the Commission on a re-hearing of the case [1] issued a new order which permitted the carriers " to restrict their transportation of window shades at third-class rates to those limited to a specified maximum valuation at the time of shipment." The effect of the court's ruling was, therefore, to strengthen rather than to weaken the value of commodity principle.

A case [2] similar to the above was that in which the Commission decided that a rate on box shooks higher than that on lumber was not justifiable, since investigation showed that a car load of lumber weighed about 36,000 pounds and was worth from $350 to $800, while a car load of box shooks weighed about 30,000 pounds and was worth only $220.

Several cases coming before the Commission have had to do with the relative rates on the principal cereals and their products. In most of these cases the Commission has based its decisions mainly on a consideration of the competitive conditions surrounding the shipping and marketing of grain and its products, but to a slight extent it has made the difference in value between the grain and its products a reason for allowing higher rates on the latter. The Commission's whole attitude on the question is well expressed in its treatment of the matter of a differential between corn and corn meal shipped from Missouri river points to Louisiana.[3] Its statement is as follows: —

The Commission has, as a rule, approved a reasonable difference between any raw material and the manufactured article, but when the amount of labor, and increased value, and extra risk, were so comparatively insignificant as upon grain whole and grain ground,

[1] 6 I. C. C. Rep. 548.

[2] Michigan Box Co. v. F. & P. M. R. R. Co. et al., 6 I. C. C. Rep. 335.

[3] 11 I. C. C. Rep. 227.

it has not found that any very great extra freight charge was warranted by the needs of the carrier, as a protection to any industry or just to the consumer, and wherever the carrier has seen fit to waive its privilege of a slightly advanced rate for the carriage of its product, and the rate on the raw material was reasonably low, the Commission has not interfered with that discretion.

A differential of 3 cents per 100 pounds above the freight charges on corn was allowed in the transportation of corn meal from the Missouri river to points in Texas,[1] and a differential of 5 cents was allowed to the Pacific coast.[2] In these cases, as in most of the others which we have considered, the carriers' cost of service arguments based on the greater risk involved and the greater expense of handling the manufactured product were given some degree of recognition by the Commission, tho less emphasis was placed upon these considerations than upon the difference in the values of the commodities.

Milk and cream may for all practical purposes be regarded as the same article in different stages of manufacture and the Commission has recognized the difference in their values as a sufficient justification for charging 45 cents per can for transporting cream while only 35 cents were charged for carrying milk.[3] At the same time the reasoning employed by the Commissioners in reality resolves itself into a cost of service argument.

The element of value in the commodity transported forms a proper consideration to be taken into account in the establishment of a rate. The liability of the carriers as an insurer of freight against all loss except such as is occasioned by the act of God or of the public enemy, is elementary, and the greater the value the greater the risk.

[1] 11 I C C Rep 220.

[2] 11 I. C C Rep 212

[3] N W Howell et al v N. Y , L. E. & W R. R Co et al , 2 I C. C. Rep 272; 2 I. C. R. 162.

Two cases which bring out very clearly the influence which value of commodity should have, in the opinion of the Commissioners, in determining the reasonableness of railway charges have to do with the relative rates on live stock and packing-house products. At the same time these cases illustrate the limits fixed by competition to the application of this principle.

In the first case, a complaint instituted by the Chicago Board of Trade,[1] the defendants, a number of carriers in the Middle West, were in the habit of giving lower rates on packing-house products from Sioux City, Iowa, and other western packing centers to Chicago than they gave to live hogs when shipped to the same market. They defended their practice on the grounds of (1) higher cost of service in the case of live hogs; (2) larger traffic in packing-house products and the materials used in these houses, such as salt, ice, etc., which furnished return cargoes in part; and (3) the necessity of protecting vested interests, since large investments had been made in the western packing industry, based on the expectation that lower rates were to be given its products.

None of these reasons was found by the Commission to be borne out by the evidence submitted or to be sufficiently important to warrant the discrimination in rates. On the contrary, the Commissioners declared: —

As articles of commerce, the evidence shows without conflict, that the live hog and its products are in direct competition with each other. This only brings out in a stronger light the discrimination that is made against the traffic in the live hog as compared with the traffic in the product. Of the two the product is very much more valuable; it is transported at more expense to the carrier.

[1] Chicago Board of Trade v C. & A R R et al., 4 I C C Rep 153, 3 I C R 233

The evidence submitted tended to show that the value per 100 pounds of live hog was from about $4.50 to $4.75, while an equal weight of the packing-house product was worth about $7.50.

In view of the very great difference in the values of the two commodities, we might naturally expect that much lower rates on the live animals than on the products would be ordered by the Commission. But owing to the keen competition existing between the Chicago packers and those of the western cities, the Commission did not feel warranted in going so far. They contented themselves with a notice to the carriers that the " rates made by them on live hogs should not be greater than upon packing-house products."

In the second case of this sort with which the Commission was called upon to deal, practically the same complaint was made, the complainant being the Chicago Live Stock Exchange.[1] Some new conditions in this case, however, demand our consideration.

During the years intervening between the earlier Chicago Board of Trade decision and the hearing of this case several of the carriers which were defendants in the former case had extended their lines westward beyond the Missouri river. Other lines, like the Chicago & Great Western Railway, extended only to that river. The roads extending beyond the river were inclined to establish such rates as would favor the traffic in live stock, since in this way shipments to Chicago would be entirely over their own lines. The roads terminating at the river were, on the other hand, inclined to establish such rates as favored the traffic in live-stock products; since if the animals were unloaded and slaughtered at the Missouri river towns,

[1] Chicago Live Stock Exchange v C. & G. W. R'y Co et al., 10 I. C C. Rep. 428.

these lines would share in the shipment of the products to Chicago and the East. The real cause of the discrimination was, therefore, competition between the lines extending beyond the Missouri river and those terminating at the river.

The testimony offered before the Commission showed that the giving of lower rates on live-stock products than on the live animals was due to the action of the Chicago & Great Western Railway whose lines terminated at the Missouri river. The competition of this line had forced the other roads, so it was claimed, to depart from the order issued by the Commission in the Board of Trade case. The defense offered by the Chicago & Great Western was lower cost of service in the case of the live-stock products. The evidence, however, showed that the real purpose of the discrimination was to secure for this carrier a larger share of the traffic in the products of live stock than it could otherwise hope to obtain.

The Commission found little evidence tending to support the claim of the Chicago & Great Western that the cost of service was higher for the live animals than for their products. The officials of nearly all the other roads represented in the investigation expressed the opinion that the rates on live stock should not be higher than those on animal products, while some of the officials claimed that the live-stock rates should be lower than for the meat products. The Commissioners themselves said: "Altho we think cost of transportation is a very important element, we do not consider it a controlling element in this case." They ordered the carriers to give such rates on live stock as should not *exceed* those on the live-stock products. Their decision rested on the value of commodity principle, expressed as follows: —

In determining what the relation should be between the rates charged for transporting two different freight articles, value is often an important factor, but this is not alone because of the greater risk connected with the transportation of the more valuable article. Improvements made during recent years in the road-beds and equipment of carriers have rendered the item of risk in many cases of little consequence. The value of the article is important, principally, because of its bearing upon the value to the shipper of the transportation service; and the value of the service is, and has always been considered by carriers, one of the important elements to be considered when fixing the rates to be charged for transportation. As stated in the findings of fact, live-stock products, compared with the live animals, are about twice as valuable.

As in the Board of Trade case, so here also, the Commission was not able to follow this argument to its logical conclusion by requiring lower rates on live animals than on packing-house products. The nature of the competition between these two classes of commodities was such that equal rates seemed to be required. In describing this competition, the Commissioners made it evident that the emphasis which they placed on the relative values of the commodities was due to the fact that these values were believed to reflect the competitive relationship which existed between them. They said: —

Another very important factor is the relation existing between the articles transported. If the relation is remote, such as that between flour and silk, a change of a few cents per hundred pounds in the rates charged for transporting one of them may not affect traffic in the other; but if the relation is close, such as that between raw material on the one hand and goods manufactured from that material on the other, a slight change in the adjustment of transportation charges between the two articles may be sufficient to close manufacturing plants at some points and increase the output of plants elsewhere. And it is because of this difference that some discriminations made by the carriers are justifiable under certain circumstances.

One of the cases most difficult to solve which has come before the Commission is that of the *Grain*

Shippers' Association of Northwest Iowa v. the Illinois Central Railroad Company et al.[1] The case presents too many elements to enable us to consider them all under a single heading, but value of commodity plays such an important part in the discussion that the case demands our attention here.

The rates complained of were those on corn, wheat, and other grains from Sioux City and other points in northwestern Iowa to Chicago and to points on the east bank of the Mississippi river. The complainants urged that the rates on these grains were too high to enable them to be raised and marketed with a profit. It was said that the rates were disproportionately high as compared to those on other commodities having a higher value and whose costs of transportation were higher. Particular emphasis in this connection was placed on the relatively low rates given on hogs and cattle, and it was said that the adjustment of rates was such that it favored the farmers who fed their grain and shipped the live stock and thus discriminated against the small farmers and tenants who could not afford to buy stock for feeding. When the case is looked at in this light it will be seen that it involves the question as to what shall be the rates on raw material (grain) as compared to those on its manufactured products (hogs and cattle).

The answer of the defendants to the complaint that rates on grain were excessive as compared to those on other commodities was that this complaint might have some justification if rates were made under "ideal conditions," but that under the "actual conditions" with which the carriers had to deal, where competition was the "controlling consideration," such rates as were asked for by the complainants

[1] 8 I. C. C. Rep. 158.

were impossible. In this connection the Commissioners inquired of the traffic managers present " upon what basis a freight rate was made, what elements entered into it," and their questions seem to have been particularly directed towards finding out what part the value of the commodity played in determining the rate charged for its transportation. The answers of the traffic managers, as condensed and set forth by the Commissioners, were as follows: —

In ideal traffic conditions certain elements would be taken into account in establishing a freight rate. These, among others, would be value of the commodity, the cost of service, the volume of traffic, etc. Under these conditions the witnesses rather thought that value might be a pretty important factor in determining the freight rate. Under actual conditions, while an attempt was made to regard these various considerations, as a rule, the controlling influence was competition. The witnesses expressed the opinion that the rates on grain would be, if such ideal conditions could obtain, too low [1] in proportion to the rates on manufactured articles, but it was said that such ideal conditions did not and could not obtain. . . . In a word, the freight tariff was made as it was, not because it ought to be that, but because it must be that. The railways obtained all they could, which was still too little. The witnesses all said that the grain rates in question were entirely the result of competition.

The Commissioners were inclined to agree with the traffic managers in their statement that the rates in question were established as a result of competition, but they were not willing to admit that the carriers were justified in neglecting the other elements which should be considered in the fixing of freight rates. This was particularly true of the value of the commodity. The Commissioners say: —

Value is undoubtedly an element which should be considered in the fixing of rates. It is often a most important element but

[1] The reference here seems to be to rates on grain from Minneapolis and Kansas City to Chicago, which the testimony showed were much lower than from northwest Iowa, owing to excessive competition at those points.

plainly cannot be made an arbitrary standard independent of all other considerations. This case certainly shows that in the opinion of these traffic men produced as witnesses, the present tariffs do not represent an ideal relation in rates between different commodities, and perhaps fairly shows that if such ideal relations could be obtained the rates on grains are too high as compared with those on some other commodities, especially manufactured articles.

It was, however, the relation between the rates on grain and those on live stock which seemed to the Commissioners especially unfair.

Whether the grain shall be shipped to market or fed in the vicinity of where it is raised depends, in a measure, upon the freight rate upon the grain and upon the live stock. For this reason there ought to be, to some extent, a correspondence between the rates upon these commodities, and a decrease in the rate upon one ought ordinarily to be accompanied by a decrease in the other.

An investigation of the changes in rates between 1887 and 1898, when the case was heard, showed, however, that the decline in the rate on live stock had been much greater than in that on grain. "We are of the opinion, too," say the Commissioners, "that the rate on live stock at the present time is lower in proportion to the service rendered than that on grain."

Without making any formal order in the case, the Commissioners recommended a considerable lowering of the rates on grain from Sioux City and surrounding territory to Chicago. In reaching this conclusion the members of the Commission were undoubtedly influenced mainly by the showing made by the complainants as to the relative rates on grain and live stock when compared with the relation between their market values.

(*b*) Coming now to the second sub-group of cases, dealing with commodities which are competitive in

character, we shall notice, first, a case which had to do with the relative rates on Pearline and common soap.[1]

The carrier had undertaken to place Pearline in class four of the Southern classification and to charge a rate of 73 cents per one hundred pounds between New York and Atlanta. Common soap was placed in class six, which under ordinary conditions would have given it a rate of 49 cents to Atlanta. Owing, however, to the existence of water competition between New York and Atlanta, common soap had received a special rate to Atlanta of 33 cents per 100 pounds.

The presentation of the arguments in the case brought out the following points: (1) Pearline was an article in general use and was used for the same purpose as was common soap, with which article it was in direct competition. (2) The market value of Pearline was about twice that of the common soap. (3) The risks involved in its carriage were somewhat greater than for the soap. (4) Water competition at Savannah made necessary a lower rate on soap to Atlanta than to other points, but Pearline, owing to risks from dampness, could not be shipped by water, hence no special rate was given it to Atlanta.

The Commission held that the discrimination against Pearline was too great, that it should be placed in the fifth class and be given a rate of 60 cents per 100 pounds. Common soap was to remain in the sixth class and pay the full rates of that class, except to Atlanta, where the competition of a through rail and water route made the special rate of 33 cents per 100 pounds necessary.

In explaining the reason for allowing a difference in the rates on the two commodities, the Commissioners say: —

[1] James Pyle & Sons v. East Tenn., Va & Ga R R Co., 1 I C. C. Rep. 465.

The very great difference in the value and also the risk in case of serious accident in the transportation of Pearline as compared with common soap would seem to indicate that there is ground for a reasonable difference in the freight rates on these two articles.

The decision seems to rest chiefly on the difference in the values of the two commodities, tho it should be noticed that two other considerations furnish a partial explanation, viz. the risks (*i. e.* the cost) of transportation and, in the case of the special Atlanta rate, the existence of water competition.

Value of commodity is again the controlling, tho not the exclusive, consideration in the case of *Coxe Bros. v. The Lehigh Valley R. R. Co.*[1] The complainants had asked that the same classification and rates be given to anthracite coal that were given to the bituminous product.

The Commissioners declined to make this concession on the grounds that (1) the value of the anthracite coal was greater and therefore the service of transporting it was worth more to the shipper; (2) the shorter distance from the mines to the principal markets in the case of anthracite rendered its transportation per ton-mile more expensive. This latter argument, it will be noticed, is based on cost of service.

The Commission, however, ordered that some reduction be made in the rates on anthracite, since rates on coal are generally less than on such commodities as iron ore and pig iron, whose value is greater, while the Lehigh road had in force higher rates on coal than on these commodities. The evidence showed, too, that this road had but recently raised the rates on coal, after having for two years maintained lower rates on the anthracite coal than on these iron products. The long maintenance of the lower rates

[1] 4 I. C. C. Rep. 535, 3 I. C. R. 460.

on coal satisfied the Commissioners that their rates were profitable to the carrier.

Another coal case which falls within this group is that of *McGrew v. Missouri Pacific R'y Co.*[1] The Commission decided that the carrier might properly make a distinction in classification between soft and lump coal, used only for domestic purposes, and "mine-run, nut, mill and slack" coal used only for steam purposes, and might give a lower rate to the latter class. Such a distinction clearly rests for a justification on differences in the values of the two commodities.

In the case of *Wolf Bros. v. Alleghany R'y Co. et al.*[2] it was decided that since paper bags were made of cheaper paper, were packed in a different way, and were used for a different purpose than were merchandise envelopes, there was no objection to giving these bags a lower classification and lower rates than were accorded to the merchandise envelopes, even tho the complainant called these envelopes paper bags and was able to show that the cost of service in transporting them was less than for the ordinary envelopes.

Still another concession to value of commodity over cost of service appears in one of the Standard Oil Cases.[3] The carrier was ordered to charge only on the basis of the weight of the oil carried in barrels when it charged for oil only, if carried in tanks, and not to charge barrel shipments on the gross weight.

2. *Non-Competitive Commodities*

The second class of decisions in which the value of the commodity is selected as the controlling consideration in the determination of the railway rate has to do with articles which, tho not of the same kind and

[1] 8 I. C. C. Rep. 630. [2] 7 I C C. Rep. 40.

[3] Rice, Robinson & Winthrop v Western N. Y. & Penn. R R. Co., 4 I. C. C. Rep. 131; 3 I C R. 162.

not directly competitive, are nevertheless so similar in character as to warrant similar treatment.

In the first case [1] of this sort the Commissioners refused permission to the defendant carrier to classify railroad ties in class five (manufactured wooden commodities) while at the same time it classified lumber and other unfinished wooden articles in class six, and in addition gave a special low rate to lumber. The defendant claimed as a reason for placing ties in a higher class than lumber that " tie shipments are less in quantity and require switching for single cars, whereas in the case of lumber, we switch a large number of cars together." The Commission rejected this cost of service argument, not because it was based on cost of service and was therefore incorrect in principle but because the statement was " not convincing."

No special reason appears in the evidence why tie shipments are not likely to be as large per day as lumber shipments, therefore the distinction cannot be sustained on the ground of greater cost of movement, for no such greater cost is established.

The Commissioners maintained that lumber and ties were so alike in character and the conditions for transporting them were so similar that they should be classed alike and that such discrimination as was shown by the defendant was not justified by the relative values of the two commodities.

In another case [2] the Commissioners held that it was unjust and unreasonable to put raisins in a higher class, taking a higher rate, than was given to dried fruits, since the market value of the raisins was uniformly lower than that of California dried fruits.

[1] Reynolds v Western N Y. & Penn R'y Co. et al , 1 I. C. C. Rep 393, 1 I C. R 686.

[2] Martin v. Southern Pacific Co et al., 2 I. C C. Rep. 1, 2 I C R. 1

The same conclusion was reached with reference to the classification of celery.[1] The carriers were ordered to give it the same classification and rates as were given to cauliflower, asparagus, lettuce, whether shipped in car load or less than car load lots. It was said that since the original classification was made, celery had come into much more common use.

> Its production has greatly increased and its market value has declined. It certainly is no more a table luxury than some of the vegetables which have a lower class in the Western classification.

A rather curious attempt to adjust rates in mathematical proportion to the values of the commodities is furnished by a case[2] coming before the Commission where the question was as to the relative rates on cabbages and potatoes. The Commissioners said: —

> As the weight of a barrel of cabbage is three-fourths of that of a barrel of potatoes and its price or value only one-half (two fourths) it would seem that there is a difference of one-fourth in favor of cabbage. This is upon the assumption that bulk and value would operate equally in proportion to amount in enhancing rates. Our conclusion is that the rate on cabbage from Charleston should be one-fourth less than the rate on potatoes.

It should be said, however, that this reasoning was only incidental to a general discussion which dealt with more important matters, and it would be a mistake to lay much emphasis upon it as an expression of the views of the Commissioners.

In order to determine the importance which should be attached to the value of a commodity in fixing the rate which is to be paid upon it, the Commissioners have at times taken into consideration the uses to

[1] Tecumseh Celery Co. v. Cin. Jackson & Mackinaw R'y Co et al, 5 I C. C. Rep 663, 4 I. C R 318

[2] Truck Farmers' Association of Charleston and Vicinity v Northeastern R. R. Co of South Carolina et al, 6 I C C. Rep. 295.

which a given commodity is to be put. In one case [1] the question was raised as to whether cow peas were to be classed with such commodities as corn and oats, or whether they should go into a class with commercial fertilizers and take the same rates as the latter commodity. The complainants urged that cow peas were used for fertilizing purposes, but the defendants held that they were also used extensively as a feed for cattle and even to some extent as an edible. The Commissioners found the facts to be as stated by the defendants. As a fertilizer it was shown that the cow peas were not only more valuable than other fertilizers, but were capable of fertilizing pound per pound more land than cotton-seed meal and other fertilizers: —

> The planter can afford to pay a higher rate on cow peas used in the process of enriching his land than he can afford to pay upon commercial fertilizers; while on the other hand, the carriers would derive inadequate revenue from the carriage of this product if the peas should be treated as complainant insists they should be. There are other facts, however, which still further distinguish cow peas from fertilizers in general use. The vine is used as fodder in stock feeding quite extensively throughout the Southern States, and the pea itself is consumed by many as an edible, and its use as food is quite general. Again, the value of cow peas per hundred pounds is greatly in excess of that of the general fertilizer, a fact which should be considered in fixing rates.

Another case [2] which illustrates the same point, — that the use to which a commodity is to be put must be considered in determining the rate to be paid upon it, — is that in which the Commissioners decided that "the Scheidel outfit," an electrical apparatus mainly employed in the production of the X-ray, should be classified with medical and scientific instruments and pay double first-class rates in the Official

[1] A. G. Swaffied v Atlantic Coast Line R R. Co et al, 10 I. C. C. Rep. 281.

[2] W. Scheidel & Co. v Chi & Northwestern R'y Co et al, 11 I C C Rep 532.

classification, rather than be classified with " electrical appliances not otherwise specified " which were charged single first-class rates only. The Commissioners said, however, that if later there should develop a considerable demand for a similar mechanism for commercial uses, then all such mechanic appliances, including the Scheidel outfit, might be entitled to a lower rating.

The case, however, which best illustrates the principle applicable throughout this entire group is that of *Rice v. Cincinnati, Washington & Baltimore Railroad Co. et al.*[1] Itshows that the importance which the Commission is willing to attach to the value of a commodity as a measure of the reasonableness of a railway rate is less in the case of commodities noncharacter than in the case of those which are in direct competitive in competition with each other.

Complaint was made that the rate on refined petroleum oil was unreasonable as compared to that given on cotton-seed oil, which, tho transported in much the same way and having a higher market value, was nevertheless given a lower rate. The Commission declined to adjust the rates on these two commodities on the basis of their relative values, holding that inasmuch as they were not competitive commodities the discriminating rate given to one could not " appreciably affect the market price of the other," and therefore could not unjustly affect the shipper. The two products were so dissimilar in character and supplied such different demands that a low rate on one could not be of any disadvantage to the shippers of the other.

The Commissioners were willing to admit, however, that since the methods of transporting the two com-

[1] 5 I C C. Rep 193, 3 I C R 841

modities were much the same, the rate given on one commodity might have "some bearing" on the reasonableness of the rate on the other, especially when their relative values were taken into consideration, and it was seen that the higher priced commodity was receiving the lower rate.

In respect to the methods and cost of transportation, these commodities (cotton-seed oil and turpentine) have a notable resemblance to petroleum products, and the cheapest of them is several times more valuable than illuminating oil. . . . Notwithstanding the comparatively low value of refined petroleum, the amount exacted for its transportation is in some instances 60% greater than the sum accepted for carrying cotton-seed oil between the same stations. It is impossible to reconcile such inconsistent charges. The cotton-seed oil rate, in the cases referred to, is not forced upon the railroad, and must, therefore, be presumed to be remunerative; but if the lower rate for the higher priced article is reasonable to the carrier, how can the higher rate for the lower priced article be reasonable to the shipper?"

Other cases which have come before the Commission might be cited to show how the principle of value of commodity has been made use of to determine the rate on non-competitive articles, but other considerations enter into these cases and their discussion would not aid in the presentation of the argument.

3. *Market Value the Criterion*

The third class of cases in which the value of the commodity transported is accepted as a test of the reasonableness of the railway rate is not a large one nor in itself of great importance. Its importance lies rather in the fact that these cases show that, in judging of the values of the commodities in question, the Commissioners have in mind the market values rather than the intrinsic utilities of the articles.

A manufacturer of patent medicines made objections [1] to the Official Classification employed on eastern railway lines, according to which patent medicines were placed in first class when shipped in less than car load lots and in third class when shipped in car load lots; whereas beer, ale, etc., when shipped in less than car load quantities, were given a third class rating, and in car load lots were placed in fifth class. The complainant asserted that not only were the modes of packing, the methods of handling, and the risks of transportation the same for the patent medicines as for the beer, ale, etc., but that the "intrinsic value" of the patent medicines was no greater than that of the beer, etc. The higher market value of the patent medicines it was said was simply "the result of skill in advertising." The Commissioners, however, declared that: —

> The value of an article to the manufacturer is the price it commands and it seems only reasonable that carriers should take into account the market value, a thing generally known and easily ascertained, as one of the considerations in arranging their classifications and fixing the rates that a commodity should bear. It is not seen how the relations that any specific commodity should bear to other commodities for classification purposes can be arrived at in any other practicable way.

Since the evidence in this case showed that a car load of the patent medicines in question had a market value of $5400, while a car load of beer or ale sold for about $1800 the Commission decided that the existing differences in classification and rates were justified.

The same attitude was observed in the case of the *Andrews Soap Company v. Pittsburg, Cincinnati & St. Louis Railway Co. et al.*,[2] where the complainant had

[1] Warner v. N. Y. C. and H. R. R. Co. et al., 4 I. C. C Rep. 32; 3 I. C. R. 74.

[2] 4 I. C. C. Rep. 41; 3 I. C. R. 77.

urged that his soap, tho advertised as a toilet soap, was in reality of the same character and utility as laundry soap and therefore entitled to the lower rates given to laundry soap. The Commissioners said: —

A manufacturer's description of an article to induce its purchase by the public also describes it for transportation and carriers may accept his description for purposes of classification and rates.

4. *Social Considerations*

We come finally to a fourth class of cases in which the value of the commodity is accepted as a criterion of the reasonableness of the rates. Here social considerations are cited by the Commissioners as reasons why commodities having a high value should be called upon to pay higher rates than commodities having a low value. Such an idea finds frequent expression in the Commission's decisions, as for example when it is said in discussing the rate on hay:[1] "When the market price of a commodity yields but scant return for labor and expenses of production, the cost of transportation needs to be as moderate as may be consistent with justice to the carriers." The same position with reference to the hay rate was taken in the case of *The National Hay Association v. The Lake Shore & Michigan Southern Railway Company et al.*[2]

A more explicit enunciation of this doctrine is, however, found in the discussion of the rates on iron and steel products.[3] Low rates on these commodities said the Commission are

[1] Behlmer v. Memphis & Charleston R. R. Co. et al., 6 I. C. C. Rep. 257; 4 I C R. 870.

[2] 9 I. C. C. Rep. 264.

[3] Colorado Fuel & Iron Company v. The Southern Pacific Company et al., 6 I. C. C. Rep. 488.

largely due to the character of such commodities, the use to which they are put, the demand for them in large quantities throughout the country, their susceptibility of movement at less cost and risk to the carrier than high class and more valuable freight, and other like conditions. It is to the interest of the carriers as well as the public, that their rates be low enough, if not below a remunerative point, to permit the general movement and distribution of these commodities in general demand in larger quantities for construction, building, manufacturing, and other purposes. Reasonable freedom of such movement and distribution stimulates the growth and development of the country and thereby promotes all interests. . . . Rates on steel rails and other low grade freights of the character stated, yielding per ton per mile the average received on all freight would be unjust.

A further indication of the importance which the Commissioners attached to the market values of these commodities in fixing the rates to be paid upon them is shown by the fact that it was later decided [1] that in cases where the carriers had reduced the rates on iron and steel because of a reduction of the prices of such articles due to commercial depression, they were justified in advancing the rates when the commercial depression was past. The Commissioners were careful to repudiate the idea that freight rates in general might be adjusted on the principle of the sliding scale, but they found something akin to this system in the traffic in iron and steel and did not care to disturb it.

Iron rates seem to be peculiarly susceptible to these commercial influences. The charge for transporting pig iron from southern producers to northern points of consumption has for a long time varied directly with the value of the article transported.

Social considerations have seemed to the members of the Commission to require that the rates on the lower priced grains, corn and oats, should be lower than those on wheat,[2] and that a considerable reduc-

[1] In the Matter of Proposed Advances in Freight Rates, 9 I C. C. Rep. 382.

[2] 4 I. C. C. Rep. 48, 3 I. C. R. 93.

tion in the price of wheat should be followed by a reduction in the rates on that commodity charged by the carrier.[1] Generally speaking, the Commission seems committed to the principle that where the market price of a commodity is low and it is an article in general demand, the interests of the public require that the carrier should be satisfied with small profits from the transportation of this commodity.

The equitable rule doubtless is that rates should bear a fair and reasonable relation to the antecedent average cost of the traffic as delivered to the carrier for transportation and the average market price the freight will command, or, as it is termed, the commercial value of the property.[2]

It might be thought that the principle of value of commodity could never be applied in connection with the passenger traffic. It is true that in most countries, and to a limited extent also in the United States, the passenger coaches are divided into compartments, having different accommodations and different rates. By so doing it is expected that people of little means may nevertheless travel on the railroads if they are content to accept accommodations inferior to those furnished to the first class passengers. There is no compulsion, however, on the part of millionaires to travel first class and to pay the high rates, if they prefer to take advantage of the low rates offered to those who travel in the second or third class compartments.

In one case,[3] however, the Interstate Commerce Commission has upheld certain railroads in their practice of putting immigrants into a special class

[1] 6 I. C C. Rep 520.

[2] Delaware State Grange v N. Y , Phila. & Norfolk R. R Co. et al., 4 I C C. Rep. 588; 3 I. C. R. 554

[3] Savery v. N. Y. C. and H. R. R Co. et al., 2 I. C C. Rep. 338.

and giving them lower rates than were accorded either to first or second class passengers, and in their refusal to sell tickets to other persons at the same rates as were given to immigrants even tho these other persons were willing to ride in the immigrant cars.

The reason given by the Commission for sustaining the carriers in this case was that immigrants are

> a class of persons readily distinguishable from the general public, and so far constituting a special class that up to that time when they are received upon the cars they are subject to exceptional regulations for reasons, which being accepted as a basis of legislation, must be deemed sufficient.

Altho the Commissioners do not here set forth value of commodity as a reason for granting lower rates to immigrants than to other persons, it seems difficult to justify this discrimination on other grounds. The cost of service would not be less in the case of immigrants than for other persons travelling in immigrant cars. The fact that immigrants constitute "a legally recognized class of persons subject to exceptional regulations" would not of itself justify lower rates than for native-born Americans any more than it would justify higher rates. It is, however, logical to consider immigrants as constituting a class of persons possessing little means, having therefore little ability to pay and thus subject to a lower rate than that given to other passengers. Broad social and governmental considerations therefore serve to justify the lower rates given to these persons of little financial ability.

This review of the more important cases in which the Interstate Commerce Commission has based its decision in large part on considerations involving the value of the commodities, serves to show that while

value of commodity has undoubtedly at times been accepted as a test of the reasonableness of a given rate, the use made of the principle has been much less than one would naturally suppose, in view of the strong assertion by the commission that "the value of the article carried [constitutes] the most important element in determining what shall be paid upon it." There is little, indeed, in the experience of the Interstate Commerce Commission to warrant Professor E. R. Johnson's expectation that as governmental regulation proceeds, rates will more and more be fixed "with reference to the values of the commodities." [1] In those cases in which the Commissioners have referred to the principle of value of the commodity as influential in determinimg the rate they have never insisted that charges should be *proportional* to the values of the commodities.

In many of the cases decided by the Commission the value of the commodity has been referred to because it indicated in some degree the risk assumed by the carrier. In the most important group of cases which we have considered, the Commission has felt obliged to take into consideration the differences in the values of finished and unfinished goods in order to preserve competition in their production. In still other cases the desire to preserve competition among carriers has led to the consideration of the relative values of the competing commodities. In only a relatively small number of cases has the Commission felt that social and economic considerations were so urgent as to require that commodities entering largely into general consumption and having a low value

[1] Johnson, American Railway Transportation, p 281 Cf "The Principles of Governmental Regulation of Railways." Political Science Quarterly, vol. xv, pp. 46–47.

should be given the benefit of low rates; and even in these cases the argument might be advanced that it was the general demand for the commodities rather than their low values which led the Commissioners to prescribe the low rates.

III. Cost of Service

The proposition that in the business of railway transportation, with its large proportion of fixed to circulating capital, it is impracticable to determine the costs of performing any particular service or of transporting any particular commodity, has been so often demonstrated that we need give it no further consideration. If the theory of cost of service is to be employed in explaining the principle of railway charges, the term costs must, undoubtedly, be used in the sense of joint costs.[1]

We have already observed that the original members of the Interstate Commerce Commission held that the cost of service principle was not applicable to railway charges. Their attitude in this matter is well set forth in the following quotation from their decision in one of the earliest cases[2] which came before them: —

> While cost, as has been said, is an element to be taken into account in the fixing of rates and one of the very highest importance, it cannot, for reasons well understood, be made the rate basis, but it must in any case be used with caution and reserve. This is not merely because the word " cost " is made use of in different senses when applied to railroad traffic, it being often used to cover merely the expense of loading, moving, and unloading trains, but also because in whatever sense the word may be used, it is quite im-

[1] Professor Taussig has stated fully this theory of joint cost in its application to railway rates in the Quarterly Journal of Economics, vol. v, pp. 438–465. Reprinted in part in Ripley's " Railway Problems," pp. 123–144

[2] In re petition of Louisville & Nashville Railroad Company, 1 I C. C. Rep. 31; 1 I C. R. 278.

possible to apportion with accuracy the cost of service among the items of the traffic. . . . Any attempt to apportion the cost, therefore, would at the best and under the most favorable circumstances only reach an approximation. This is so well understood the world over that the proposition which from time to time is made in other countries to measure the charge of the carrier by the cost of the carriage solely, have always been abandoned after investigation.

It is well known that traffic managers and others engaged in the business of transportation flatly deny that the cost of service principle can be used as a means of fixing railway rates.[1]

In view of this strong agreement between railway officials and the members of the Interstate Commerce Commission as to the impossibility and undesirability of using cost of service as a measure of the reasonableness of a railway rate, it is somewhat surprising to find that in defending rates which have been made the subject of complaint to the Commission, railway officials and railway attorneys have frequently — perhaps most frequently — done so by the use of cost of service arguments. Even more surprising, however, is the fact that the Commissioners have not only lent a willing ear to such arguments and sustained them whenever the evidence seemed to support them, but they have very frequently on their own initiative entered into an investigation of the cost of transportation with a view to rendering a decision on the basis of the facts ascertained by this investigation. The members of the Commission have, of course, never pretended that they could ascertain the exact proportion of the fixed and operating expenses assignable to a given commodity. Such has not been the purpose of their investigations, nor the tenor of the decisions. The attempt has not been made to

[1] Cf. Kirkman, Railway Rates and Government Control, pp 73–75.

apportion the charges, as the Commissioners say, "*strictly* to the cost." But cost of service has nevertheless been used as a means of determining the reasonableness of rates in four different classes of cases. (1) When a rate higher than the ordinary could be justified on the ground that some special service had been performed or a special obligation incurred by the carrier. (2) Where a rate complained of was judged as to its reasonableness by comparing the *ascertainable* costs of transportation with those incurred in transporting other commodities whose rates were believed to be reasonable. (3) Where comparison was made with costs on other roads or on other parts of the system. (4) Where the costs of shipping commodities in car load lots were compared with those incurred in shipping less than car load quantities. By methods of comparison, therefore, rather than by attempting to ascertain the exact and total costs of transporting a given commodity, the Interstate Commerce Commission has made use of the cost of service principle as applied to railway rates. We shall take up for consideration each of the four classes of cases in turn.

1. *Costs of Rendering Some Special Service*

Under this heading, the first case with which we have to deal is that of *John P. Squire & Co. v. The Michigan Central Railroad Co. et al.*[1] This case should be compared with the Chicago Board of Trade and the Chicago Live Stock Exchange cases which we have already considered and in which, it will be remembered, the Commissioners made value of commodity the controlling principle. In the present case,

[1] 4 I. C. C. Rep. 611; 3 I. C. R 515.

however, much greater emphasis was placed upon the cost of service.

The complainant in the case was engaged in the business of slaughtering hogs in the vicinity of Boston. For some time, the railroads had granted him a rate of 30 cents per 100 lbs. on live hogs transported from Chicago to Boston. The rate on dressed beef and hog products had been fixed by the Trunk Line Association, after an exhaustive hearing, at 65 cents per 100 lbs. With this adjustment of rates the complainant had been satisfied. Railway competition, however, soon set in, and while the rates on live hogs remained the same as before, those on hog products fell lower and lower, being at times as low as 17 cents per 100 lbs. With this relation of rates existing between the live hogs and their products, the business of the complainant was being ruined, since it was brought out in the hearing of the case that virtually the only difference in the cost of slaughtering hogs in the East and West was the cost of transporting the live animals.

The complainant asked that the rates be based on purely "commercial considerations," wholly independent of the cost of the service. He argued that the railroads should justly make relative rates such that both parties could live, and that the product rate should be higher than the live-hog rate, even if the cost of transporting the two articles were the same, which he claimed was not the case.

The argument resting on the relative values of the two commodities should have exerted an influence, it seems, on the minds of the Commissioners, since value of commodity had been accepted as the controlling principle in the earlier cases which dealt with the same commodities. In the present case the Com-

missioners did not accept this line of reasoning. They admitted that the increased value of the product might legitimately be taken into account in the fixing of the rate, but they declared that to base rates upon the theory advanced by the complainant would mean that the rates on live hogs would have to vary with every change in the market price of the animals in the western markets.

The Commission therefore proceeded to make a lengthy investigation into the relative costs of transporting the two kinds of commodities and reached the following conclusions: —

(1) The product is carried in more expensive cars. . . . The interest on the increased original cost and the greater outlay for repairs are constant expenses. (2) The weight of the refrigerator car, when loaded with the product, including the ice for refrigeration, is about 64,000 pounds, and that of the live-stock car when loaded is 46,000 pounds. If the tariff was based solely upon tonnage, that is, upon the weight of the car and its load when the carrier charges 30 cents per hundred for carrying the live hogs, the charge for carrying the product should be about 42 cents per hundred (3) The loading and unloading of the animals by the shipper instead of the carrier is a continuing advantage. (4) The rapidity with which the cars used in the live-stock traffic are loaded render them less liable to detention, and they are returned to the traffic sooner than when loaded with the product. (5) The refrigerator cars have to be iced. Five tons of ice and salt per car are furnished in the Chicago-Boston business. This is a constant expense in summer months. (6) The product is more valuable than the live animals.

All of these considerations except the last, it will be noted, have to do with the extra costs incurred by the carriers in transporting the meat products. The costs, it is true, are not accurately determined. Indeed there is much that seems arbitrary in the Commissioners' methods of computing the extra costs due to the methods of handling the meat traffic, by which they arrive at the conclusion that the rates

in force at the time of the hearing of the case, viz. 30 cents per hundred pounds for live animals and 45 cents per hundred for the products, furnish an equitable adjustment of the dispute. The Commissioners of the Trunk Lines had previously given the question of the relative rates for these commodities much thought and had concluded that when the live-hog rate was 30 cents per 100 pounds, the rate on the hog products should be 65 cents. We are interested at present not in the merits of the decision but in the theory by which the Commissioners reached their conclusion; and concerning this their explicit statement leaves us no way in doubt.

> We are of the opinion that in the fixing of relative rates upon articles strictly competitive, as these are, the proper relation should be determined from the cost of the service, and if the difference in this respect between two competitive articles can be ascertained, such a rate should be fixed for each as corresponds to the cost of service. . This is fair to the carrier and we believe that the manufacturer has a right to demand of the companies that such a relation of rates as to these articles should be maintained.

In the investigation made by the Commission in 1902–1903 into *The Matter of Proposed Advances in Freight Rates*,[1] an inquiry was made into the reasons for a recent advance in the rates on dressed beef from 40 cents to 45 cents per 100 pounds. The carriers claimed that the 45 cent rate was not an advance but a restoration of a rate which excessive competition had made it impossible to maintain in the past. Competitive conditions had now so changed that it was believed that the old rates could be maintained. The Commissioners after investigation concluded that the explanation given by the carriers was satisfactory and that the 45 cent rate was reasonable, —

[1] 9 I. C. C. Rep. 382.

especially in view of the fact that while the rate is high the service is expensive to the carriers. The loading of these cars is of special construction, and heavier than the ordinary car; refrigeration must be provided, which necessitates the hauling of large quantities of ice and salt, an express service is demanded and the car must be returned empty.

The same line of argument was employed in the case of the *Truck Farmers' Association of Charleston and Vicinity v. Northeastern Railroad Co. of South Carolina et al.*[1] The complainants claimed that $6\frac{1}{2}$ cents a quart was exorbitant for transporting strawberries from Charleston, S. C. to Baltimore, Philadelphia, and New York, and that an undue disparity existed between the rates on strawberries and those on potatoes and cabbages shipped in bulk. The carriers defended the rates on berries in view of the unusual costs incurred in their transportation, which they described at length. They claimed, furthermore, that the rates were properly enough made higher on berries than on the potatoes and cabbage because the berries were worth more per pound.

The Commissioners attached little weight to this value of commodity argument made by the defendants, and in their decision placed the emphasis on the high costs of the service. They went carefully over the evidence submitted by the carriers and undertook to calculate the necessary costs of getting the berries into the New York market in good condition. They concluded that the charge of two cents per quart for icing was too high by about one half cent per quart, but otherwise they appeared satisfied with the showing made by the carriers as to the cost of service. They announced, therefore, that a rate of six cents per quart for transporting berries from Charleston to

[1] 6 I. C. C. Rep. 295.

New York was not excessive, and this decision they defended in the following manner: —

> The rate per ton-mile under the charge above prescribed of six cents per quart will be very much higher than that demanded by carriers on ordinary freight. Relatively higher rates on strawberries, however, appear to be justified by the exceptional character of the service connected with their transportation. This exceptional service is necessitated by the highly perishable character of the traffic, requiring refrigeration *en route*, rapid transit, specially provided trains, and prompt delivery at destination. There is also involved in this service extra trouble in handling at receiving and delivering points, extra facilities at such points, the "drilling" of cars in a train, reduction of length of trains to secure celerity of movement, partially loaded cars, the return of cars empty, and perhaps other similar incidentals.

In a case [1] analagous to the above the Commission decided that 81 cents per 100 pounds was a reasonable rate for transporting peaches in car load lots from Atlanta to New York. The same considerations creating an expensive cost of service were present in this case as in the one just treated. "In view of these considerations," said the Commissioners, "we cannot say that the established rate is so excessive as to call for condemnation." An interesting feature of this case was the refusal of the Commission to allow the carriers to increase their charges in a progressive rate whenever the value of the car load exceeded $500. The carriers sought to justify the increase on the ground that the danger of damage to freight was greater in the case of the heavier car loads and that there was no other means of covering these risks, since no charge was made for the excess over the prescribed minimum weights for car loads. It is evident that the higher rates could have been upheld on the value of commodity principle, and the

[1] Georgia Peach Growers' Association v. The Atlantic Coast Line R. R. Co. et al. 10 I C. C. Rep. 255.

failure of the Commission to recognize this fact shows how far its members had departed from their former view that " the value of the article carried [is] the most important element in determining what shall be paid upon it."

In spite of the refusal of the Commissioners to recognize unusual liability to damage as a reason for charging higher rates in the above case, this has not always been the attitude of that body. In the case of the *New Orleans Live Stock Exchange v. Texas & Pacific Railway Company*,[1] the peculiar argument was advanced by the defendant that certain high rates on cattle shipments, which were the subject of complaint, were due to the fact that the carrier was frequently obliged to pay excessive damages awarded to Texas shippers by the Texas courts. The Commissioners were unwilling to admit that " a judgment rendered in the course of judicial procedure is unjust or excessive," but they did recognize that the character of the live-stock traffic was such that large sums for damages might have to be paid by carriers engaged in this traffic, and that this was, " an incident in the transportation of that commodity which may properly be taken into account by the railroad in establishing its tariffs." The higher rates in this given instance were not allowed, however, for the reason that the testimony seemed to show that the large claims for damages were due to the carriers' own negligence; and the Commission held that shippers of cattle ought not to be called upon to pay higher charges for transportation " to make good the negligence of the carrier itself."

Higher rates on lumber shipped from Dalton, Georgia, to points on the Ohio river than were charged

[1] 10 I. C. C. Rep. 327.

from other places near Dalton were upheld by the Commission [1] because of differences in the cost of service which resulted from "dressing-in-transit" privileges accorded Dalton but not the other places.

The Commissioners said: —

> The dressing of the lumber results in a comparatively important waste of raw material, which is by that amount loss of tonnage to the carrier, a duplication of terminal expense, a loss of time and increase of expenses by reasons of delays in the through shipment to destination.

The decision of the Commission in the case of the *Commercial Club of Omaha v. The Chicago & Northwestern Railway Co. et al.*[2] that the carriers were privileged to charge higher rates on goods sent from Omaha, Nebraska, to points within the State of Iowa than were charged to the same points from Council Bluffs, Iowa (across the Missouri river from Omaha), rested in the main upon the opinion of the majority of the Commissioners that Council Bluffs was entitled to its natural advantages of location for carrying on a trade with Iowa cities. In part, however, the majority of the Commissioners made use of the cost of service argument as a defense of their decision; and cost of service was the sole basis of the argument employed by Commissioner Prouty, who supported the majority in its decision but not in its principal arguments. Even the dissenting Commissioners admitted that the decision of the majority might properly be upheld upon the basis of cost of service arguments were it not for the fact that to all other points than those in Iowa the carriers had established equal rates from those two cities.

[1] J. K. Farrar et al v Southern R'y Co, et al, 11 I C C Rep. 632.

7 I. C. C Rep 386.

The cost of service argument rested upon the fact that, in carrying goods from Omaha to Iowa points, the railroads were obliged to make use of an expensive bridge across the Missouri river and to pay the tolls for the use of this bridge exacted by its owners. Messrs. Knapp and Yeomans said, for the majority: —

> These shipments to Iowa towns require a greater service from the carriers than is performed for Council Bluffs merchants for they are hauled a greater distance and over an expensive bridge. The charge for this extra service is admitted to be reasonable and those for whom it is performed cannot justly complain because it is not gratuitously rendered. . . . The defendants which constructed the bridge over this river, and the defendants which have leased the right to run their trains across it are *prima facie* entitled to some compensation for their outlay.

Enough cases have been cited to show that the members of the Interstate Commerce Commission have reached the very reasonable conclusion that where the conditions of the traffic are such as to require some special service on the part of the carriers, involving unusual expenditures, the carriers are justified in demanding higher rates to cover these extra costs, and that to this extent at least the cost of service principle is applicable in the case of railway rates.

2. *Comparison with other Commodities*

In this class of cases the Commission has sought to make a study of the comparative costs of transporting different commodities, oftentimes with a view to determining their classification. But since in the Commission's own words, "classification is the foundation of all rate making," it follows that if the classification has been based on costs, these costs inevitably determine the rates to be charged for their transportation.

Possibly the best illustration of this class of cases is the effort made by the Commission to determine the relative rates on oranges and strawberries,[1] shipped from Florida to the New York market. In an earlier case the Commission had decided that a reasonable rate on oranges was $120 per car. On the basis of this decision the complainants asked for a reduction of the rates on strawberries which, at the time of the hearing of the case, averaged $361.80 per car.

The Commissioners proceeded to ascertain, what, if any, were the considerations which would justify different rates on strawberries than on oranges and how great these differences should be. As stated by the Commissioners these differences are as follows. It will be noted that all but one of them have to do with cost of service.

(1) The expense of handling berries at junction or terminal points, berries not being handled with trucks, as are oranges. (2) Allowances for hauling the berry cars on the passenger trains on the line of the F C. & P railroad. (3) Extra dead weight of refrigerator cars when loaded with berries instead of oranges, owing to the fact that an average berry load is only half an orange load. (4) Extra risk of loss in case of accident arising from negligence of carrier. (5) Less value of the oranges. (6) Less volume of the berry traffic. (7) Only one half the weight of the average car load of oranges makes an average car load of berries. (8) Oranges can go by water or ordinary trains. Berries must go by fast trains. (9) Oranges do not require refrigeration, but refrigeration is indispensable in the berry traffic.

On the basis of these considerations the Commission ordered a reduction in the rates on berries so that they should pay only double first-class rates plus 30 cents a crate. This would make the rate on an average car load $299.70.

[1] C. P. Perry v. The Fla. Cent & Pen R. R Co et al , 5 I C. C Rep 97, 3 I. C. R. 740

In a similar manner the Commissioners discuss the relative rates on beans and tomatoes.[1] The defendant carrier had placed beans in the second class of the Southern Classification and tomatoes in the third class, altho in weight and value the two commodities were much the same. This classification resulted in a rate of 70 cents per 100 pounds on beans shipped from Verona, Miss. to East St. Louis, Ill., while tomatoes were charged only 44 cents for the same distance. The Commission did not order a change in rates or classification, but in the following words declared that the existing rates were unwarranted: "The present difference of almost one half in the rate on beans and tomatoes, when the actual cost of transportation is nearly the same, ought to be remedied."

In several cases which have come before the Commission having to do with the relative rates on corn and corn products, that body has, as we have seen, allowed slightly higher rates on the corn than on its products, mainly owing to the higher value of the latter commodities. In several other instances, however, the differences in the rates on these commodities have been adjusted on the basis of the comparative costs of transportation.

In the case of *H. Bates and H. Bates, Jr. v. The Pennsylvania Railroad Company et al.*,[2] complaint was made by a firm of Indianapolis millers that owing to a change in classification the carriers were charging a rate of 23 cents per 100 pounds for transporting corn meal from Indianapolis to Chicago, while a rate of only 18½ cents per 100 pounds was charged for raw corn. This relation of rates was said to be proving ruinous to the Indianapolis milling industry. The

[1] W. R. Rea v The Mobile and Ohio R R Co,, 7 I C C. Rep 43

[2] 3 I. C C Rep 435, 2 I C R. 715

carriers based their defense mainly on the competitive conditions surrounding the traffic, particularly competition by the Great Lakes which affected the rate on corn but not that on corn products.

The Commission did not believe that water competition was very effective in the case of corn sent from Indianapolis, owing to the distance of that city from the Great Lakes. It declared that "no reason founded on cost of service exists for a difference in rates between corn and corn products," and tho it was admitted that the manufactured product was commercially a little more valuable than the corn, other advantages existed in the transportation of the product, so that "on the whole the transportation of each at the same rate was equally valuable to the carrier." The carriers were therefore ordered to cease discriminating between corn and corn products.

The carriers succeeded in obtaining a rehearing of the case,[1] and having discovered that the Commission was inclined to place more weight on differences in the cost of transporting the two commodities than on differences in the commercial values, the defense prepared its brief on the basis of a cost of service argument. Evidence was submitted to show that a difference in the rates on corn and corn products was justified by higher loading and terminal expenses for the corn products than for the corn. It was shown that the difference in the rates which at the time of the former hearing was $4\frac{1}{2}$ cents per 100 pounds had now been reduced to $2\frac{1}{2}$ cents. The rates on corn could not be raised, it was said, because if this were done, it would shut the farmers of the Indianapolis region out of the eastern market, since the rates would then be higher than those from the North and West,

[1] 4 I. C. C Rep. 281, 3 I. C. R. 390

where water competition compelled low rates. On the other hand, if the rate on corn products was made as low as that on corn, " the carrier would receive less than a justifiable charge without substantial advantage to the farmers."

On the basis of this showing the Commission decided to vacate its former order which required equal rates on the two commodities. The reasons for this reversal of its decision were stated as follows: —

(1) We think the additional testimony has established the fact that the cost of service to the carrier including terminal expenses properly chargeable as freight charges, is greater on the product than on raw corn. (2) The present rate on corn is down to the lowest point that railroads can possibly reach on corn and leave any profit, and lower than they can go on the product without loss (3) The downward pressure of competition in the transportation of corn is greater than on the products of corn

The Commission felt that the reduction by the carriers of the differential between corn and corn products from $4\frac{1}{2}$ to $2\frac{1}{2}$ cents per 100 pounds had remedied in large part the evils complained of. Accordingly its former order was vacated and no further order was issued.

In another case [1] which had to do with the difference in rates on corn and corn meal shipped from Kansas points to points in Texas, the Commissioners said: —

We find that the difference in the cost of service in the transportation of corn and corn meal does not exceed three cents per 100 pounds, and that there are no other conditions surrounding the transportation of these two commodities like differences in value, greater liability to injury, etc., which justify a difference in rate of more than three cents.

The last case [2] in this group which we shall cite is of much interest, for the decision of the Commission

[1] Board of Railroad Commissioners v. The Atchison, Topeka & Santa Fe R'y Co., 8 I. C. C. Rep. 304

[2] Cattle Raisers' Association of Texas v. Missouri, Kansas & Texas R'y Co. et al., 11 I. C. C. Rep. 296.

rests upon a careful balancing of the costs of service, cited by the defense as a reason for high rates, against certain other costs cited by the complainants or discovered as a result of the investigation which would have tended to make low rates on the traffic in question natural and desirable. The case deals with the matter of an advance in rates on live cattle shipped from Texas points to northern ranges and also to the principal cattle markets, Chicago, St. Louis, and Kansas City. The advances in rates had extended over a period of several years; and by 1903, when the complaint was filed, the rates were "higher than any rate ever in effect since rates were filed with the Commission."

The carriers claimed that the rates formerly in force were the result of severe competition and furnished no standard of reasonableness. They defended the existing rates by an elaborate showing as to the costs of service of the cattle traffic as compared to the costs of transporting other commodities. Since the costs cited by them appear in the Commission's decision, presently to be quoted, it will not be necessary to give them at this point. One thing in which both the carriers and the Commission seemed to agree was that the case should be decided on the basis of cost of service. Even the usual practical objection to this method of determining the rate disappears in the light of the Commission's statement that "*it is possible to determine with reasonable accuracy the cost of transporting a train of this live stock between any two points.*" [1]

The Commission, however, did discuss other considerations than cost of service which might justify the increase of rates. It discovered that neither the

[1] Italics mine.

carriers' need for revenue nor any increase in the value of the commodity transported could legitimately serve as an excuse for the advances. On the contrary the ton-mile revenue from the cattle traffic was greater and the cost of movement no larger than in the case of other freight, while the cost of producing cattle in Texas was greater than at the time the first advances in rates were made. The new rates were not the result of competition but were the result of concerted action on the part of the roads acting through the Southwestern Tariff Committee.

Returning then to the cost of service arguments put forth by the defendants, the Commissioners said: —

> These traffic officials all base their opinion upon the assumption that the cost of handling this cattle traffic is much greater than the average cost of handling all traffic. The reasons which they give for this assumption do not, as we have seen, bear examination. They all say that the cattle traffic is more expensive because cattle trains are shorter than other trains, but the testimony in this record shows that they are in fact longer. It is said that the loading of a cattle car is less than the average loading of other freight cars, and, therefore, that the paying revenue of the train in which they are transported is less, but, it appears that while the loading of the individual car is lighter, the revenue freight in the cattle train is as much or more than in the average dead freight train. Other disabilities are pointed out. Some of these are capable of being expressed in dollars and cents as the cost of maintaining pens and shutes, the cost of bedding and disinfecting cars, the cost of loading, the extra hazard peculiar to this species of traffic, etc. These aggregate from one to one and one half cents per hundred pounds. In addition there are certain minor matters like the use of a longer caboose, the return of the attendants, the stopping to feed and water which are not susceptible of any estimate upon this record, but of which the aggregate cannot be large. There is the more important fact that this traffic must be given an express service, but we have seen that the greater expense of providing a fast service depends largely upon the fact that the train loading of revenue freight is lighter, whereas here the loading is at least equal to the average. There is a very substantial disadvantage growing out of the fact that a large percentage of cattle

cars must be returned empty; but here again the difference is less than one would suppose from a casual consideration of the subject. The empty movement in case of all traffic is necessarily large, being some thirty per cent as applied to the entire car mileage of most of the defendants as against forty or forty-five per cent in case of stock cars. This, however, is a substantial disability against this traffic.

If we turn to the rates themselves we find that the average revenue per ton-mile which these stock rates yield is greater in all cases and much greater in some cases than the average rate per ton-mile. We also find that while the average rate per ton-mile in case of all these defendants decreased materially from 1892 to 1903 these stock rates, even before the advances of 1903, had in most cases increased. . . . The cost of operation has increased in some respects, but this has been more than offset by the introduction of improved methods and especially by the large increase in the volume of the traffic.

The Commission accordingly reached the conclusion that the advances in rates made during 1903 were unjust and unreasonable and that the existing rates were therefore " unjust and unreasonable by the amount of said advances." The carriers having made their defense strictly on the plea that the costs of moving the live stock were higher than for ordinary freight, the Commissioners followed this line of argument and declared that " the average cost of moving live stock is not greater than the average cost of moving all commodities." To show, however, that they fully agreed with the carriers that the decision should be reached on the basis of cost of service arguments, they say : " In determining a reasonable rate the cost of performing the service, as has been just observed, is one element in that rate, and cost of movement is an important item in arriving at the entire cost of service."

There are many other cases in which the Interstate Commerce Commission has made use of the method of comparative costs to enable it to judge of the rea-

sonableness of a given rate. Usually, however, other arguments are relied upon in part, and the cost of service principle is therefore presented in less distinct fashion than in the preceding cases.

3. *Comparison with Rates Elsewhere*

A second method of comparison employed by the Commission in certain instances has been to judge of the reasonableness of a given rate by comparing the costs of performing the service with the costs incurred on other roads or on other parts of the same road where the rates were believed to be reasonable. There are not many cases of this sort and they need not long detain us.

Complaint was made in one case [1] that the rate for transporting cotton from Meridian, Mississippi, to New Orleans was too high. The investigation showed that if more than 20 cents per 100 pounds, or about a dollar a bale, were charged, it would be more profitable for shippers to send their cotton to the eastern market by another route. At the same time, it was apparent that such a low rate would be an unprofitable one to the carrier, since, even with the rates then in force, the carrier was earning little more than operating expenses. The Commissioners declared that while the fact that a rate was unremunerative must not be overlooked, this would not justify rates grossly excessive. They decided that the costs of sending cotton from Meridian to New Orleans could not be more than the costs of sending it from Shreveport, Louisiana, to New Orleans, where the rate was $1.50 per bale. The carrier was accordingly ordered to

[1] New Orleans Cotton Exchange v. Cincinnati, New Orleans & Texas Pacific R'y Co. et al., 2 I. C. C Rep. 375, 2 I. C. R. 289.

reduce the Meridian-New Orleans rate to $1.50 per bale.

In another case [1] the defendant carriers had been shipping wheat to market over a route 478 miles in length, having many heavy grades and curves, and had charged 32½ cents per 100 pounds for such shipments. There was, however, a shorter route, only 311 miles in length, having only a few ascending grades and these exceedingly light. Wheat was not sent by this route, altho it would have been much cheaper thus to transport it. The Commissioners held that the rate of 32½ cents might be presumed to be reasonably remunerative over the longer and more expensive route and must therefore be excessive over the less expensive and more direct route. "The complainants," it was said, "have a just and reasonable right to have the products of their farms carried to market by the shortest and least expensive routes at a reasonable through rate."

In the important case of *George J. Kindel v. the Boston & Albany Railroad et al.*[2] complaint was made that rates on cotton piece goods in less than car load lots shipped from Boston, New York, and other Eastern points, were charged $2.24 per 100 pounds to Denver, while only $1.50 per 100 pounds was charged to San Francisco, 1400 to 1600 miles beyond Denver. Car load lots were charged only $1.00 per 100 pounds to San Francisco but a special car load rate was refused to Denver.

The Commissioners concluded from their investigation that the low rates to San Francisco were permissible under the circumstances, in order to meet

[1] Newland et al. v. The Northern Pacific R. R. Co et al., 6 I. C. C. Rep. 131; 4 I. C. R. 474.

[2] 11 I. C C. Rep. 495

water competition, *provided* that these rates were not so low as to cause the transportation of such merchandise at a loss and thus compel other traffic to make up this loss. If, however, the existing rates to San Francisco were sufficient to cover costs, then the high rates to Denver which resulted from a combination of several local rates must be regarded as unreasonable. The Commissioners said: —

> The actual cost of carriage is ignored, as an element in rate making in this method of charging and collecting the local rates for through shipments. The local rates are fixed by the carriers to cover all terminal expenses on the shorter hauls, charges and delays to the initial and terminal points, and it is not reasonable on a joint through haul, where these terminal delays and expenses are spared at the intermediate points, that such economy in transportation should not be shared by the shipper who must bear the burden of the long 2000 mile haul, and it is unreasonable and unjust on the part of the carriers that the long, uninterrupted through route, even if no through rate is agreed to, should bear the full local rates.

On the supposition then that the $1.50 rate to San Francisco covered the costs of transportation, the Commissioners claimed that the same rate would prove sufficient to Denver. They remarked: —

> It would seem that the $1.50 must pay a reasonable profit to the carriers and it is our judgment that the rates in question should not exceed that. Surely a rate which pays expenses for a 3400 mile haul will yield reasonable profits for a haul not much above half that distance when the service actually rendered is far the cheaper and easier half of the total haul.

4. *Car load and Less than Car load Shipments*

The rule that commodities shipped in car load lots usually take lower rates per 100 pounds than when shipped in less than car load quantities itself rests upon the principle of cost of service. This fact has been frequently emphasized by the Interstate Com-

merce Commission, as in the case of *The Harvard Company v. The Pennsylvania Company et al.*[1] where it is said that the mere fact that one article is shipped in greater quantities than another when there is no considerable difference between them in " bulk, weight, and value," and " in expense of handling and hauling," constitutes no reason for a difference in their rates and classification.

> Mere quantity not measured by a recognized unit of quantity adapted to the carriage, and lessening the expense of handling and carriage, cannot be allowed to affect rates in the transportation of property. . . . The lower rate in proportion upon car loads of freight, treating a car load as a unit, than upon the same article in less than a car load does not come within any such principle as this, but is founded altogether on different considerations.

In the following cases the Commissioners make it clear that these " different considerations " pertain to the cost of transportation. Another Standard Oil case [2] furnishes the first illustration.

Complaint was made, among other things, that the carrier was charging exceedingly high rates for barrels of oil when shipped in less than car load lots, and these rates were shown to be in many instances more than double the rates on barrels sent in car load quantities. After hearing the arguments on both sides, the Commissioners decided to sustain the existing difference in rates. They reached this conclusion with great reluctance because the rates on less than car load lots were so high that they seemed to be " in their nature prohibitory." The Commissioners were careful to say that such great differences in the rates would not be permissible in the case of other kinds of freight and were only allowed in the oil traffic because

[1] 4 I C C. Rep. 212, 3 I. C. R. 257.

[2] W. C Schofield et al v Lake Shore & Michigan Southern R'y Co , 2 I C C. Rep 90 , 2 I C. R 67.

"the cost of service is very considerably less in the case of shipments in car load lots than in the less than car load quantities." The reasons for this great difference in costs were found to be as follows: (1) The shipment by car load goes direct to destination. It is loaded by the shipper and unloaded by the consignee. On the other hand, freight when sent in less than car loads has to be taken out in parcels, and the expense of loading and unloading is performed by the company. (2) In the case of car load lots only one bill of lading is necessary and only one entry is made upon the way-bill. When less than car load lots are taken a separate receipt or bill of lading has to be given to each shipper and a separate entry for each item is made upon the way-bill. (3) The time occupied in transportation is less in the case of car load lots, for smaller shipments must be sent by local freight trains stopping at every station for which there is a shipment. In this way the time occupied in transporting the smaller lots is from two to three times as long as that required for car load lots. (4) In the case of car load lots there is only one collection of freight charges while for the smaller shipments there are as many collections as there are different parcels. (5) In the case of less than car load lots there inevitably remains vacant space in the cars for which the carrier receives nothing. (6) The risks from loss of fire are greater in the case of oil sent in small lots, for these small shipments are unloaded in the station house, while car load shipments are unloaded at a distant point.

It would be interesting, did space permit, to discuss at length the case of *Thurber et al. v. The New York Central & Hudson River Railroad et al.*,[1] one of the

[1] 3 I C C. Rep 473, 2 I. C R. 742

most perplexing cases which have come before the Commission for its decision. The complaint concerned the rates given on groceries shipped in less than car load quantities from New York to retailers in the central and western states. Much lower rates were given on car load shipments, and it was alleged that this discriminated against eastern distributors. Emphasis was placed by the complainants on social considerations, especially the fact that the normal mode of shipment of such commodities was in small packages. They did not deny that some difference might be made in the rates on car load and less than car load quantities, but held that such difference "should be so small as not to consume the commercial profit on the goods." The carriers on the other hand based their defense mainly on the lower cost of handling car load shipments.

The Commsisioners denied that it was the business of carriers so to fix their rates as to preserve a commercial profit to manufacturers or jobbers, but they also declared that cost of service was not the controlling principle in this case. The controlling principle was the interest of the general public. The public was more interested in miscellaneous shipments of groceries than in solid car load shipments. The carriers should accordingly adjust their rates so as to conform to the existing business of the country. At the same time the Commissioners recognized that the car load was a practicable unit of quantity and that if an article moved in sufficient volume it was reasonable to give it a car load classification. The difference between car load and less than car load rates, they said, is "based on the well known fact of a difference in the cost of service by the carrier."

The Commissioners accordingly decided that the

carriers were not justified in charging more for car load shipments when a full car load was sent from many consignors to many consignees, than when sent from one consignor to one consignee, but "in the case of smaller shipments to many consignees at many destinations, there is such material difference in the cost of service, in the earnings of cars, and in car detentions, as to justify a higher charge."

In spite therefore, of the Commissioners' statement that cost of service was not the controlling element in the case, it would appear that, in the final analysis, cost of service determined the Commission's decision with reference to a difference in the rates on car load and less than car load quantities.

In the case of *The Buckeye Buggy Company v. The C. C. C. & St. L. Railway et al.*[1] the Commissioners held that inasmuch as the practice of giving car load rates on buggies had been followed by the carriers and held legitimate because the cost of handling this business was less, the same rule must be applied whether the consignor or consignee was the owner.

> The defendants may clearly require that the goods shall be located at one time and place, that but a single bill of lading shall be issued, that the shipment shall be from one consignor to one consignee, but when these goods are so loaded, when by the terms of the sale they become the property of the consignee upon delivery to the carrier, the carrier has no right to inquire whether the consignee obtained his title from one or from several owners. If they accord a car load rating in case the consignor is the owner, they should extend the same privilege when the consignee is the owner.

In the last case[2] which we shall cite to illustrate the application of the cost of service principle, the Commission decided that if $100 was a reasonable

[1] 9 I. C. C. Rep. 620.

[2] C. M Barrow v Yazoo & Mississippi Valley R R. Co, et al , 10 I C C. Rep. 333.

rate for " transporting twenty-five horses, which is about an average car load, together with an attendant, $99 is too much for transporting four horses with no attendant."

To the average man the unreasonableness of the latter charge would appear to be because the four horses were worth less than twenty-five, and it would seem that this consideration should have appealed to a body of men who had declared " the value of the article carried " to be " the most important element in determining what shall be paid upon it." The Commissioners did not however advance this argument in the present case but explained their decision on the basis of a difference in the cost of service. " The car may perhaps weigh the same in either case, but the total weight of the full car load is considerably more, the actual cost of hauling is more, the expense of unloading and reloading is more." It was accordingly suggested that the defendant so modify its rates as to charge no more than $72 in the aggregate for transporting four horses, if the rate of $100 for a full car load remained in force.

Our review of the cases in which differences in the costs of service have been cited by members of the Commission as reasons for differences in rates shows that the Commissioners, as well as the traffic officials of the various railroads, have made much greater use of the cost of service principle than their preliminary utterances would lead us to expect.

It has seldom happened, of course, that an effort has been made to apportion the charges strictly in proportion to the costs of rendering a specific service. It is doubtful, however, whether any class of business men to-day undertake to do this. Their method is

rather that followed by the Commissioners in the cases which we have considered. A merchant or manufacturer by comparing the receipts from one department or one line of goods with the outlay for this department and then comparing these net returns with those in other departments, arrives at certain conclusions as to the relative profits from the several lines of business. The fixed expenses chargeable to the business as a whole he assigns in a more or less arbitrary fashion according to labor costs, or to the cost of the material or, even more loosely still, according to floor space, it may be, or according to the amount of sales or the number of employees, or whatever in his business seems to be the best unit of measurement. By carefully comparing the rates of growth of the various departments with the growth of his profits, he is able year by year to correct his former standards of measurement.

In the same way railway managers sometimes apportion their fixed expenses according to the ton-mileage of their different kinds of freight. In applying the comparative method of determining costs and of fixing charges in accordance thereto it would seem that the Commissioners and the railway officials have been merely pursuing the methods generally known and accepted by most careful business men, and the cost of service principle doubtless is capable of much the same application in the railway business as it is elsewhere, — unless it be in academic treatises on economics.

M. B. HAMMOND.

OHIO STATE UNIVERSITY.